



# HoltraChem

## Manufacturing site facts

☞ *The U.S. Environmental Protection Agency is working with the Maine Department of Environmental Protection and TycoHealthcare/Mallinckrodt Inc. to investigate and clean up mercury pollution and other contaminants at the HoltraChem plant in Orrington, Maine.*

January,

2003

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### Introduction:

This update will provide a brief summary of the significant changes made to the Preliminary Media Protection Standards and the Corrective Measures Study Work Plan as a result of public comments that have been received. An attachment summarizing the numeric, along with a narrative detailing the PMPS requirements has been incorporated into this update. The complete record of comments received, along with the U.S. Environmental Protection Agency (USEPA) and Maine Department of Environmental Protection (MDEP) response to these comments is contained in a document entitled *Holtrchem Manufacturing Company Site, Orrington, Maine, Preliminary Media Protection Standards and Corrective Measures Study Work Plan Basis Statement and Response to Comment*. Copies of this document are available in the information repositories located at the Orrington Public Library, the offices of MDEP in Augusta, as well as in Boston, Massachusetts at EPA New England. It should be noted that the stenographers notes of the public hearing held on August 13, 2002 were stolen from her vehicle on her way home on the night of the public hearing. Therefore, no official transcript of that hearing exists. Fortunately Bill Philips provided MDEP a copy of a videotape he made of the hearing which allowed us to capture the verbal comments. USEPA and MDEP wish to extend him our special thanks for his help.

Extensive comments were received regarding the need for a more extensive study of the lower Penobscot River to establish a sediment PMPS. While USEPA and MDEP believe that sufficient information exists to establish the PMPS and complete remediation of this site, we also believe the wisest course of action for

### Preliminary Media Protection Standards Modification Summary:

The most significant change to the Preliminary Media Protection Standards (PMPS) is that the PMPS for sediment will be based upon the MDEP standard that targets fish tissue levels of not more than 0.2 ppm as a goal in place of the USEPA guidance value of 0.3 ppm. This change lowers the sediment PMPS from 3.2 ppm to 2.2 ppm. The soil PMPS, which was tied to the sediment value as a basis is therefore also being lowered to 2.2 ppm.

In response to concerns expressed regarding how the averaging of sediment data will be managed in order to demonstrate achievement of the sediment PMPS, USEPA and MDEP are eliminating the use of the 10.7 ppm control limit value and imposing a limit on the size area averaged together. We are also stipulating that the two hot spot areas, identified in previous public meetings, will be remediated. This would have been the outcome with the proposed standard of 3.2 or the established standard of 2.2. We wish to make this clear to the public. Lastly, the detailed confirmation sampling plan will be available for public scrutiny when it is developed in the Corrective Measures Study or Corrective Measures Implementation phase of the project.

now, is to defer this debate. We have reached this conclusion in light of the citizens suit brought by the Maine People's Alliance and the Natural Resources Defense Council against HoltraChem Manufacturing, LLC and Mallinckrodt, Inc. under which the United States District Court for the District of Maine has ordered Mallinckrodt

to fund an independent study to “...determine: (1) the extent of the existing harm to the Penobscot River and Bay south of the plant site, (2) the need for a remediation plan, if any, and (3) the elements of, and schedule for, completion of such a remediation plan”.

If such a study should indicate that there is a need, and it is feasible, to conduct an active remediation of the Lower Penobscot, or any portion of the lower Penobscot beyond that which would be guided by the PMPS proposed at this time, then EPA and Maine DEP would be able to incorporate such need into a future action. We concur with Judge Gene Carter’s finding that “there is clearly no conflict between this court’s order requiring study of the lower river and any agency action.” We feel it is important that EPA and Maine DEP deal with the high levels of mercury contamination at the site and in sediments of the Penobscot River adjacent to the site to expeditiously maximize the reduction of risk posed by mercury released from the HoltraChem site.

### **Corrective Measures Study Work Plan Modification Summary:**

As a result of questions and comments raised by the public we also wish to clarify that the Corrective Measures Study will include:

- Evaluation of landfill removal as a remedial option on a landfill by landfill basis
- **Chronic toxicity testing at the proposed PMPS level from cove sediments to ensure that this level will not represent a detrimental level for resident species.**
- **Collection of data on, or a laboratory simulation of, the percent of methyl mercury to total mercury ratio in the sediment at different times of the year and after storm events when sediment would be stirred up.**

### **Next steps:**

Establishment of the PMPS triggers the submittal of a Corrective Measures Study Work Plan. This document

has already been submitted by Mallinckrodt on a voluntary basis and USEPA and MDEP modification of this document, made with the benefit of public comment on the document, was provided to Mallinckrodt and HoltraChem on January 21, 2003..

USEPA and MDEP anticipate that Mallinckrodt and MDEP will now enter into a modification of the Consent Decree between USEPA and HoltraChem and that Mallinckrodt will complete the Corrective Measures Study in a time frame similar to the 120 day time frame specified in the existing Consent Decree.

### **For More Information**

**Contact EPA at 888-372-7341 and ask for:  
Ernest Waterman, Project Manager or  
Pam Harting-Barrat, Public Involvement**

**Contact Maine Department of  
Environmental Protection at  
207-287-2651 and ask for:  
Stacy Ladner**

**Table 1**  
**Numeric Preliminary Media Protection Standards**

**Constituent**

<b>Media</b>	<b>Mercury</b>	<b>Manganese</b>	<b>Acetone</b>	<b>Chloro- picrin</b>	<b>Chloroform</b>	<b>Carbon tetrachloride</b>	<b>Hexachloro- methane</b>	<b>Pentachloro- methane</b>	<b>m-cresol</b>	<b>p-cresol</b>	<b>PCBs</b>	<b>TCE</b>
Groundwater	2.0 ug/L <sup>1</sup>	500ug/L or <sup>2</sup> background	700 ug/L	30 ug/L	57 ug/L	3.0 ug/L	7.0 ug/L	13 ug/L	35 ug/L	3.5 ug/L		5.0 ug/L
Surface Water (on-site)	0.91 ug/L <sup>3</sup>				57 ug/L	3.0 ug/L						
Surface Water (Penobscot R)	background											
Sediment (on-site)	2.2 mg/kg											
Sediment (Penobscot R. in Southern Cove)	Average: 2.2 mg/kg  Averaged areas less than 1/4 acre in size											
Soil	2.2 mg/kg			.125 mg/kg							1.0 mg/kg	
Air	.31 ug/m <sup>4</sup>											

1. At achievement of this PMPS it must be demonstrated that surface water PMPS is being attained or that untreated ground water discharge will not significantly lower the existing water quality. If one or the other of these conditions cannot be demonstrated ground water capture and treatment will be continued. In addition Maine's fish tissue residue standards needs to be assessed for attainment prior to shutting the ground water treatment system down.
2. All background values referenced in this table will be established during the Corrective Measures Study. Background values must also be established and met for conductivity, salinity, alkalinity, and pH in surface water and ground water.

3. The surface water standards for mercury are for total metal values (particulate plus dissolved), not dissolved metals. Discharge at this level must also be documented to not significantly lower the existing water quality and that fish meet the fish tissue residue value or for onsite fish are not significantly elevated over two other reference sites.
4. The air standard is a 24 hour averaged value at the property line and a not to exceed value (i.e. air monitoring readings must remain below .31 ug/m<sup>3</sup>) at points of offsite exposure.

**Table 1 continued**  
**Numeric Preliminary Media Protection Standards**

<b>Media</b>	<b>Constituent</b>							
	<b>1,1 dichloroethane</b>	<b>1,1 dichloroethene</b>	<b>Cis 1,2 dichloroethene</b>	<b>Trans 1,2 dichloroethene</b>	<b>Carbon disulfide</b>	<b>Bromo -form</b>	<b>Methylene Chloride</b>	<b>Bromodichlororo -methane</b>
Groundwater	70 ug/L	0.6 ug/L	70 ug/L	100 ug/L	600 ug/L	44 ug/L	5.0 ug/L	6 ug/L

**Table 1 continued**  
**Numeric Preliminary Media Protection Standards**

<b>Media</b>	<b>Constituent</b>					
	<b>dibromochloromethane</b>	<b>2,4, 5 -T</b>	<b>Cadmium</b>	<b>ethylbenzene</b>	<b>xylene</b>	<b>Tetrachloroethene</b>
Groundwater	4 ug/L	50 ug/L				5 ug/L
Soil			8 mg/kg	13 mg/kg	190 mg/kg	

## Narrative Preliminary Media Protection Standards:

Sediment (Penobscot River) - The two highly elevated areas of mercury contamination will at a minimum be removed. Sampling numbers (RSC 009, RSD 015H, RSD 015G, RSD 015E, RSD 016A, RSD 016B, RSC 012, RSC 020, RSC 010, RSD 015F, RSD 015B, RSD 015A, and RSD 015C) and (RSC 024, RSD 011C, RSD 010A, RSC 019, RSC 018, RSD 010B, RSD 010C, RSD 011A, RSD 011B, RSD 011G and RSD 011F) represents these areas.

Soil - All soils onsite and adjacent to the site that may contain mercury greater than 2.2 ppm must be vegetated, paved or otherwise stabilized to prevent erosion. In addition an industrial sweeper will be utilized on all parking lots, roadways and other paved areas each spring to collect any potentially contaminated soils. All catch basins shall contain "socks" to filter and collect any potentially contaminated soils or sediments. These socks shall be removed and cleaned or replaced periodically to maintain their effectiveness.

Surface Water - Areas of mercury contamination will be collected for treatment and will be prevented from entering the onsite surface water. At such time as Mallinckrodt believes that no further treatment is warranted, they will need to make a demonstration that: (1) the resident fish in the onsite stream meet the 0.2 fish tissue residue value or that the level is not significantly elevated over two appropriate reference sites, (2) the .91 ug/l level will be achieved in the onsite surface waters, (3) a discharge at the .91 ug/l level, or such lower level as may be present, and in the quantity present in the onsite surface water will not significantly lower the Penobscot River water quality, including during storm events (4) and a discharge at that level and quantity will not adversely affect the fish tissue levels in the Penobscot River.